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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,053	09/20/2005	Martin J. Edwards	GB 0029 US1	6187
24738 7590 04/04/2008 PHILIPS ELECTRONICS NORTH AMERICA CORPORATION INTELLECTUAL PROPERTY & STANDARDS 370 W. TRIMBLE ROAD MS 91/MG SAN JOSE, CA 95131				
EXAMINER				
TRAN, MY CHAU T				
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2629				
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04/04/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/550,053

**Applicant(s)**

EDWARDS, MARTIN J.

**Examiner**

MY-CHAU T. TRAN

**Art Unit**

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 November 2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-3, 5, 8, 13-17, 21 and 23 is/are rejected.  
7) ☒ Claim(s) 4, 6, 7, 9-12, 18-20, 22 and 24 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 20 September 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsman's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 9/20/05  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Application and Claims Status***

1. Applicant's preliminary amendment filed 09/20/2005 are acknowledged and entered.
2. Claims 1-24 were pending. Applicants have amended claims 1, 2, and 5-24. No claims were added and/or cancelled. Therefore, claims 1-24 are currently pending and are under consideration in this Office Action.

### ***Priority***

3. Receipt is acknowledged of papers, i.e. United Kingdom Application No. 0307034.9 filed 03/27/2003, submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

4. The information disclosure statement (IDS) filed on 09/20/2005 has been reviewed, and the references that have been considered are initialed as recorded in PTO-1449 form.

### ***Drawings***

5. Figures 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. Here, figures 1-3 have shown the display circuit and driving method of known liquid crystal display device (see instant specification pg. 5, lines 15-18). See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be

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labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

6. Claim 1 is objected to because of the following informalities: Claim 1 recite the phrase "*an d a display element*" of line 3. This phrase is confusing and it appear to contain a typographical error, i.e. '*an d*' should be '*and*'. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 15-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "*a voltage waveform (Capacitor)*" of claims 15-17 is vague and indefinite because it is unclear as to meets and bounds for the structural features of the recited limitation. The instant specification does not define this term and these terms are not art recognize. Moreover, the addition of the '*(Capacitor)*' to an otherwise definite expression, i.e. voltage waveform, extends the scope of the expression so as to render it indefinite. Also, it is unclear as

to the significant of the term 'capacitor' being capitalized and in parenthesis. Consequently, claims 15-17 and all their dependent claims rejected under 35 U.S.C. 112, second paragraph.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3, 5, 8, 13, 14, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Knapp et al. (US Patent 6,498,595 B1).

For ***claims 1-3, 5, 8, 13, 14, and 21***, Knapp et al. disclose an active matrix liquid crystal display and the method for driving it (see e.g. Abstract; col. 1, lines 7-23; col. 2, lines 35-52). As illustrated by figure 1, the active matrix liquid crystal display comprises a display panel (ref. #10), a row drive circuit (ref. #20) comprising shift register, a column driver (ref. #22) comprising one or more shift register/sample and hold circuit, and a timing and control circuit (ref. #19) (see e.g. col. 4, lines 8-22). The display panel comprises an array of display elements (ref. #12) (refers to instant claimed array of display pixels) wherein each display elements are arranged in rows and columns via the row conductors (ref. #14) and the column conductors (ref. #16), and each display elements comprises a thin film transistor (ref. #11) (refers to instant thin film transistor), display electrode element (ref. #17) (refers to instant claimed display element), and a storage capacitor (ref. #18) (refers to instant claimed storage capacitor) (see e.g. col. 3, line 25 thru col. 4, line 22; fig. 1). The column conductors (ref. #16) supply each display elements

with video signals (see e.g. col. 3, line 25 thru col. 4, line 22). The driving method comprises the steps of providing a pixel drive signal to each pixel for storage on the pixel for a first period of time via a first row pulse on a row conductor, the pixel drive signal comprising a selected one of a plurality of pixel drive levels; and providing a second drive voltage to each pixel for a second period of time a second row pulse on a row conductor, wherein the durations of the first and second periods of time are controlled to vary the pixel light output (see e.g. col. 4, line 56 thru col. 5, line 51; figs. 2A and 2B). The method comprises a capacitive drive scheme wherein the row waveform is modified (refers to instant claims 13 and 14) and the polarity of the voltage in one field is inverted in the next field (refers to instant claims 5 and 8) (see e.g. col. 4, line 56 thru col. 6, line 41). Although Knapp et al. do not specifically disclose that the type of liquid crystal of the active matrix liquid crystal display is a twisted nematic liquid crystal, it is art recognized that the type of liquid crystal of the active matrix liquid crystal display is a twisted nematic liquid crystal, and as a result it is inherent.

Therefore, the device and method of Knapp et al. do anticipate the instant claimed invention.

7. Claim 23 is rejected under 35 U.S.C. 102(b) as being anticipated by Dawson et al. (US Patent 6,229,506 B1).

For *claim* 23, Dawson et al. disclose a an active matrix light emitting diode pixel structure for a matrix display (see e.g. Abstract; col. 1, lines 19-33; col. 2, lines 13-25; figs. 1, 2, and 5). As illustrated by figure 1, the matrix display comprises a column data generator (ref. #110), a row selector generator (ref. #120), and an array of pixels (ref. #160) that are connected

to the column data generator and row selector generator via the column lines (ref. #140) and the row lines (ref. #130) respectively (see e.g. col. 1, lines 19-27). As shown by figure 2, each pixels comprises thin film transistors (ref. #240, 250, and 260) (refers to instant thin film transistor), a light element (ref. #OLED) (refers to instant claimed display element), and a capacitor (ref. 280) (see e.g. col. 3, lines 11-22). The column data generator (ref. #110) (refers to instant claimed column driver circuitry) that provides to the pixels constant current (refers to instant claimed reference drive voltage) and data signals (refers to instant claimed pixel drive signal) to the pixel via the data line/column line (ref. #220) (see e.g. col. 3, line 31 thru col. 4, line 34). As illustrated by figure 5, the matrix display that is part of a display system, which comprises a display controller to provide control signals and data signals to the matrix display (see e.g. col. 6, line 56 thru col. 7, line 5). This implies that the matrix display also includes a timing means as claimed in claim 1.

Therefore, the device of Dawson et al. does anticipate the instant claimed invention.

#### ***Allowable Subject Matter***

8. Claims 4, 6, 7, 9-12, 18-20, 22, and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MY-CHAU T. TRAN whose telephone number is (571)272-

0810. The examiner can normally be reached on Monday: 8:00-2:30; Tuesday-Thursday: 7:30-5:00; Friday: 8:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A. Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MY-CHAU T. TRAN/  
Primary Examiner, Art Unit 2629

April 4, 2008